March 2011

RRC Newsletter

Rome Radio Club, Inc.

Volume 1, Issue 3

Plans Progressing for RRC Hamfest on 13 August 2011

At the March 2nd meeting, VP Jim Gelose AC2DB, discussed plans for the Hamfest scheduled for 13 August 2011 at the Westmoreland VFD field.

Highlights of the Hamfest will be a local Fox Hunt and a demonstration of APRS, the **A**utomatic **P**acket **R**eporting **S**ystem .

Volunteers were solicited to handle various jobs, such as publicity, parking, talk-in, demonstrations on Fox Hunting and APRS, set up, etc.

Once again, there will be door prizes, a give away table and free donuts and coffee.

Keep and eye on the club web site for the latest information and let Jim know if you have any ideas to add or can help in any way. It looks like we will have another great time.

[Editor—see February 2011 RRC Newsletter for more info on APRS. Also see the project article on page 3 on a simple interface for a laptop to a radio for using the sound card as a packet radio interface].

RRC Makes a Donation to the Westmoreland VFD

As is customary , the RRC has made a donation to the Westmoreland VFD as a thank you for the free use of their pole barn for our club's annual Hamfest.

This year, the club donated $100 (as was approved by a successful motion from the floor at the January 2011 club meeting). Westmoreland VFD, Thank You Again!

Jan 5th 2011 RRC Meeting Summary

From the meeting minutes of the January RRC meeting's minutes, here is a summary.

Minutes were taken by the club secretary, Gordie, N2ADK. In attendance were 11 club members with the business portion of the meeting lasting about 40 minutes.

Reports included a write status from the treasurer, a verbal report from the repeater trustee, the VE coordinator, and the VP on Hamfest planning.

There was no Old business and the only new business was the collection of dues from Mike KB2CCD and Russ WB2JIL.

Russ, WB2JIL, presented a program on an error correction technique that can be applied to digital waveforms.

Inside this issue:

Special points of interest:

- *ARRL Affiliated Club*
- *Owners of Multiple Local Repeaters*
- *Host to Echolink Node*
- *VE Team*
- *Host of Local Hamfest*
- *Field Day Participants*
- *Public Service*

Getting Your Weather Station on the air with APRS

[EDITOR—The following was a posting on the Yahoo Groups—BGMSKYWARN · NWS Binghamton SKYWARN page dated May 18, 2008. by Mike N3FJA]

Many hams have weather stations in their shacks. A few of them are connected to the world via the internet. Even fewer have them connected to the world via RF on the APRS network. It may sound like a major project, but it is not. With a little work or a couple of purchases, you can be on the air.

If you already have a station setup and operational on the packet network then you are good to go as far as hardware setup.

If not here's what is needed to get a systems up and running; this will be the hardware part only. If you are connected to the internet with one of the APRS programs that are available then all that you will need to do is connect the TNC and configure the program.

The first thing that you need to decide on is what are you going to use for a radio, a few things to consider are:

1. Do I plan on leaving this set up and running all the time?

2. How much power (RF watts) do I need?

3. How big is the budget for this?

I have my station running all the time. I feel that this is the preferred way. Then your information is always sent to the APRS server and always available for use. If you choose to have a part time station that's OK your information is always appreciated.

How much power will I need? That will depend on how close you are to a digipeter. I am just about line of site with the local digi, so I have the power on the transmitter at the lowest level that it will operate at. If you are in a location that needs a higher power, try to use as low a power as you can. If you use a ham transceiver, you may be limited to the power levels that you can choose, trial and error is the only way to find out. If you use a commercial radio most of them have continuously variable output but at low power they may have a dirty RF signal. My personal choice is a commercial rig. They have a better front end and the variable power out. To connect the radio to a TNC you will need to make or buy a cable. The book from the TNC should have a wiring diagram that shows the TNC connections. If you are using a ham rig MFJ http://www.mfjenterprises.com/ Byonics http://www.byonics.com/ and BuxCom http://www.packetradio.com/wiring.htm, are a couple of places that have pre-made interface cables. They may not have a cable for a commercial rig, but you may be able to get information from their site on the pin out. If you decide to go the commercial rig path be sure that you can program the radio or have a contact that can do it for you. Most local radio shops can help you out for a small fee. Watch EBay for a rig that will fit your budget and needs.

A good radio can be had for $10.00 to $50.00. If you are going to go the full time route then a commercial rig may be the best bet, It should hold up better over time. Remember that it may not look good until you clean it up but if it works you can always hide it out of the way. Pre-made cables can be found for $9.00 to $30.00. And if you make it yourself parts might run $10.00 to $15.00.

After you have the hardware up and running then you will need to decide what software you want to use. I am using WinAPRS this is a very easy program to setup and use http://www.winaprs.org/ . The program is fully functional before registration, the only draw back is to save you configurations you must register the program. The cost for this is around $50.00. Some other programs are UIView, APRS+SA and APRSPoint. Take a look at all of them and then decide for yourself witch one you like.

Another way is to get a WXTraker from Byonics http://www.byonics.com/wxtrak/ this is the simplest way to get on the air. All that you need to do wire it up or by the premade cable and program it. I have used the TinyTraker and found that it is a well made and easy to program unit.

After you have all of the equipment up and running you can checkout this web page and see your weather station http://www.wulfden.org/APRSQuery.shtml . When you open the page scroll down and enter the call sign of you station or any station and you will see the report.

Just a few last items:

APRS frequency is 144.390mhz on PL.

Set you report rate to a reasonable rate. I have mine set to 10 minutes, and it works well for me. Most of my monitoring is from the mobile so I get up to date reports.

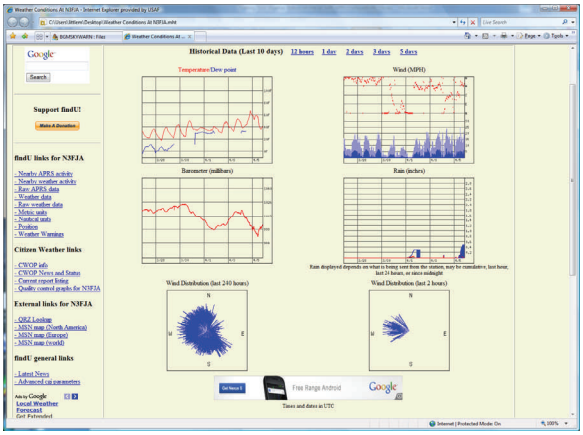
Use as low of RF power as you can. Trial and error will tell you how much you need.

If you run into any trouble the web has a lot of information that will help, I have used it a lot.

Have fun and be sure to pass around the link to your station, most people will be interested in the "neighborhood weather". Also some more hams may become interested.

Here is the link to my station http://www.findu.com/cgi-bin/wxpage.cgi?call=N3FJA&last=240.

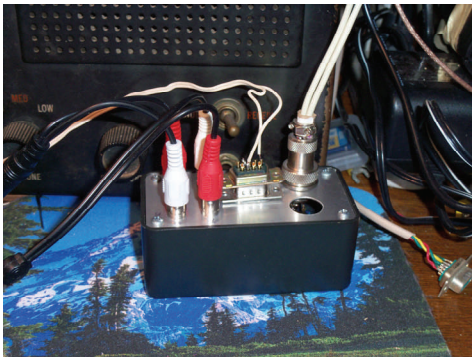
Please feel free to visit it as much as you would like, until yours is on line.



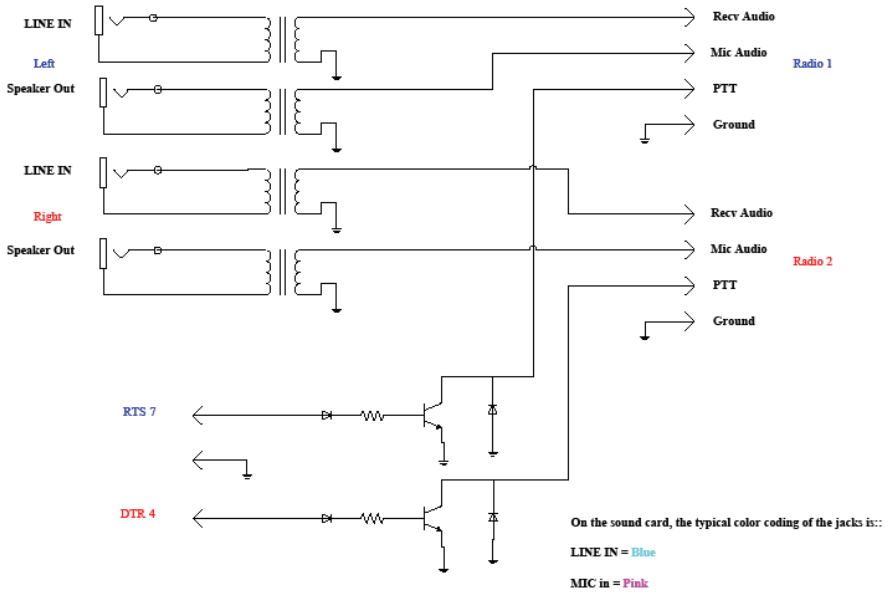
Packet Radio Sound Card Interface

This simple project provides the electrical interface between a PC with a sound card and an amateur radio. With this interface, the ham can operate packet on HF, VHF or UHF (depending on the radio) without needing a specialized TNC. The interface, with the right software, will also enable the use of SSTV, PSK32, RTTY, PACTOR, and many other digital modes.

[Editor—I've used the interface on 2m for APRS. I also used it on HF during the RTTY January Roundup]



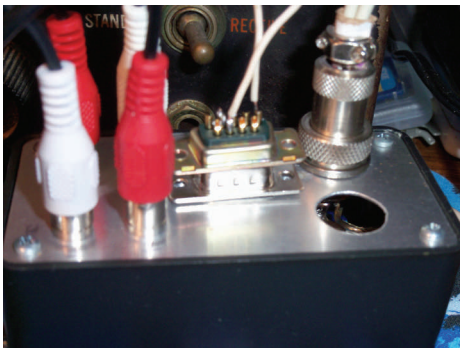
The transmit and receive audio interfaces with the computer through the speaker and line in jacks. The signals are isolated between the computer and the radio by audio transformers. The PTT function is accomplished by using either a serial port or a parallel port on the PC and having a control signal from that port switch on or off a transistor. The transformers not only isolate the grounds, but also provide impedance matching.



With careful design and fabrication, enough isolation can be achieved between the tow stereo channels to operate two radios at the same time (i.e. right channel can be APRS r packet on 2m while the left channel is doing PSK32 on HF).

The parts for this project all came from the junk box. Values can be varied to set the desired voltages. Experimentation with a bread boarded circuit should be tried before fabricating a more permanent version.

There are many resources for interface circuits. One that I used for inspiration is by **Ralph Milnes, NM5RM (ex-KC2RLM) .** He not only provides some interface hardware designs, but he describes how to set up AGWPE with the interface.



Oneida-Madison ARES News

Oneida-Madison ARES is revamping its web site. Some time during the month of April, a newly revamp web site will replace the current web page.

The new web page will have the same useful information with a new look. Please check it out. The easiest way to get to the web site will be to click the O-M ARES link on the Rome Radio Club web site.

Please check-in to one or both training sessions on the 145.170– repeater on the first and third Tuesday of the month at 1915 local time.

Also, for practice, please consider participating in at least one public service event this year.

When All Else Fails—Amateur Radio

We are on the Web!

www.romeradioclub.com

We are on the Facebook!

http://fb.romeradioclub.com/

ARRL Teachers Institute Now Accepting Applications for 2011 Sessions

The ARRL Education Services Department has announced the 2011 schedule for the Teachers Institute on Wireless Technology workshop. Offered through the ARRL's Education & Technology Program (ETP), the Teachers Institute is a four-day, expenses paid in-residence learning opportunity designed for motivated teachers and other school staff who want to learn more about wireless technology and bring that knowledge to their students. A variety of topics are covered during the TI, including basic wireless technology literacy, electronics, the science of radio, radio astronomy, how to bring space into the classroom, ham radio operation, introduction to micro controllers and basic robotics. While participants do not need to have an Amateur Radio license to attend the basic TI sessions, one is required for the TI-2 session.

"We'll be offering four sessions of the introductory Teachers Institute workshop this summer and one session of the TI-2 on Space in the Classroom, focusing on satellite communications," said ARRL Education Service Manager Debra Johnson, K1DMJ. "The workshops are offered to teachers in America's classrooms, with all expenses paid by donors who have contributed financial support to ARRL's Education & Technology Program Fund. The Dayton Amateur Radio Association (DARA) will once again host and sponsor the TI-2 session on Space in the Classroom. Generous support by Yaesu, Ham Radio Outlet and Parallax make our donors' contributions go even further."

There are four ARRL Teachers Institute sessions scheduled for 2011: June 13-16 in Albuquerque, New Mexico; June 20-23 at Parallax Inc in Rocklin, California; **July 11-14 at the Mohawk Valley Community College in Utica, New York,** and July 18-21 at ARRL Headquarters in Newington, Connecticut. The deadline to apply for the New Mexico and California sessions is April 15. The deadline for the New York and Connecticut sessions is May 15. The TI-2 will be in Dayton, Ohio on July 11-14; the application deadline is May 15.

All information about the Teachers Institutes -- including the application and a downloadable brochure -- is available online. There you can also find links to read more about what other ETP schools are doing with Amateur Radio and wireless technology topics.